REMARKS

Claims 1-13 and 15 are pending in the application after entry of this amendment. Claim 1 has been amended to clarify the subject matter which Applicants regard as the invention. Claim 15 has been added. Support for these amendments can be found in the specification of the as-filed application and no new matter is believed added.

I. REJECTION OF CLAIMS UNDER 35 U.S.C. § 102 / § 103

A. Rejection of Claims 1-13 under 35 U.S.C. § 102(b) and § 103(a)

The Office Action has rejected claims 1-13 under 35 U.S.C. § 102(b), as allegedly being anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as allegedly being obvious over Mazzotti (Journal of Chromatography, 769 (1997), pages 3-24). The Office Action has also rejected claims 2, 3, 7-10, and 13 in various combinations under 35 U.S.C. § 103(a), as allegedly being obvious over Mazzotti, in view of Nicoud, Jensen, Funk, and/or Kearney. Applicants respectfully disagree with these rejections for the following reasons.

As discussed with Examiner Therkorn on April 29, 2008, previous Office Actions in this application have incorrectly interpreted the disclosed subject matter of Mazzotti. While Applicants do not admit any anticipation by or obviousness over Mazzotti, Applicants have amended claim 1 to facilitate prosecution of the application to allowance. It should be noted that the inventive process can facilitate an enhancement of, for example, productivity, product concentration, and/or solvent use. Thus, new claim 15 has been added, further reciting an enhancement in productivity achievable by the inventive process. Support for this amendment can be found in the as-filed application.

With specific reference to Mazzotti, the claims of the present invention are neither anticipated by nor obvious over Mazzotti. The differences between Mazzotti and the present invention amount to more than an optimization of the steps of Mazzotti.

The present invention is directed to a process for chromatographically separating components of a multiple component fluid mixture by means of a Simulated Moving Bed (SMB) process, wherein the connection ports of the first and second inlets and outlets are repositioned between two respective chambers or chamber sections forming a closed circuit at the end of a

cyclical time unit, and wherein the concentration of the input multiple component fluid mixture and/or composition of the solvent is/are changed within the cycle time unit.

The SMB unit of Mazzotti achieves a stationary regime which is steady state, in which the unit exhibits the same time dependent behavior during each time period between two successive switches. Mazzotti fails to disclose that the concentration of the input multiple-component fluid mixture is intentionally changed periodically. Mazzotti also fails to disclose or suggest that the composition of the solvent is changed.

In fact, Mazzotti describes, at page 4, that an SMB unit achieves a stationary regime which is cyclic steady state, in which the unit exhibits the same time dependent behavior during each time period between two successive switches. Thus, the SMB operating parameters of Mazzotti are constant at least during each time period (e.g., the "cycle unit" or "cyclical time unit" recited in the claims of the present invention) between two successive switches of the inlet and outlet ports. Mazzotti neither discloses nor suggests the feature of the present invention wherein an operating parameter is changed within a cycle unit of the SMB process. Specifically, Mazzotti fails to disclose or suggest that the concentration of the input multiple component fluid mixture and/or a composition of the solvent is/are changed within each cycle unit, as recited in claim 1.

Further, Mazzotti, at page 17, figure 9, displays the relationship between productivity and the feed concentration. It should be noted that the feed concentration is constant in time. With respect to the calculation of the displayed relationship (page 17, left column, last paragraph), Mazzotti states that:

> all these parameters are calculated analytically by using their definitions and the …Eqs. (43-46), constant values of all other parameters appearing in Eqs. (38) and (42) have been used.

While Mazzotti does not explicitly state that the concentration in these equations has been kept constant, the equations presented do not lend any other reasonable interpretation. In contrast, if the feed concentration was variable in time, relatively complicated numerical calculations would be required. Moreover, Mazzotti does not describe any restrictions or limitations with respect to the validity of the presented calculations.

Moreover, there is no teaching or suggestion in Mazzotti regarding the change of an operating parameter within a cycle unit that would have rendered the present invention obvious. The process of the present invention can provide increased productivity of a chromatographic process over a conventional process. For example, as described in the specification at page 11, lines 26-36 (of the English translation), an increase in productivity, defined as the mass of the purified multiple-component fluid mixture per time unit and the solid, of 33 % can be achieved. Thus, Mazzotti does not anticipate and would not have rendered obvious the present invention. Accordingly, this rejection should be withdrawn.

CONCLUSION

Applicants request consideration of the amendments and remarks presented herein and that a Notice of Allowance be issued. A credit card payment submitted *via* EFS Web in the amount of authorizing payment in the amount of $1,860.00, representing $810.00 for the Request for Continued Examination fee under 37 C.F.R. § 1.17(e) and $1,050.00 for a Three-Month Extension of Time under 37 C.F.R. § 1.17(a)(3). This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

BALLARD SPAHR ANDREWS & INGERSOLL, LLP

/ Kevin W. Hathcock /
Kevin W. Hathcock
Registration No. 52,998

BALLARD SPAHR ANDREWS & INGERSOLL, LLP
Customer Number 23859
(678) 420-9300 Phone
(678) 420-9301 Fax

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